

# Sustainability Concepts In An EMS

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# NREL

- The nation's premiere Laboratory for renewable energy and energy efficiency research, development, and tech transfer
- 1100 workers on two sites in Golden, Colo.
- Programs conducted for EERE include:
  - Photovoltaics
  - Geothermal
  - Vehicle Technology
  - Bioenergy
  - Hydrogen
  - Distributed Energy
  - Buildings
  - Wind
  - Basic Science
  - Thermal Systems
  - Analysis
  - Comp. Sciences

# ORDER 450.1

- Promotes portions of a Sustainability program where those elements are driven by specific regulations; e.g., pollution prevention, ODS reduction, recycling
- DOE sites can benefit by incorporating the broader elements of Sustainability with their EMS

# SUSTAINABILITY

- “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”
- Sustainability concepts are very flexible
- A Sustainability program can be part of an EMS, or vice-versa, or they can be free-standing yet coordinated activities
- Properly integrated ISM, EMS, and Sustainability programs can be transparent or can maintain strong, individual identities

# SUSTAINABILITY FRAMEWORK

- Provides a framework to measure performance in areas of importance to stakeholders
- There are three framework “Dimensions” :  
Economic - Environmental - Social
- Supported by “Categories” and “Aspects”
- A balanced set of applicable Aspects is selected representing all three Dimensions
- Aspects are consistent with ISO 14001 but broader

	<b>CATEGORY</b> - Areas of importance to stakeholders	<b>ASPECT</b> - Specific area of performance measurement	
<b>Economic</b>	Direct Economic Impacts	Customers Suppliers Employees	Providers of capital Public sector
<b>Environmental</b>	Environmental processes	Materials Energy Water Biodiversity Emissions, effluents, and waste	Suppliers Products and services Compliance Transport
<b>Social</b>	Labour Practices and Decent Work	Employment Health and Safety Labor/management relations	Diversity and opportunity Training and Education
	Human Rights	Strategy and management Non-discrimination Security practices Freedom of association and collective bargaining	Child labor Disciplinary practices Indigenous rights
	Society	Community Bribery and corruption	Political contributions Competition and pricing
	Product Responsibility	Customer health and safety Products and services	Advertising Respect for privacy

# SUSTAINABILITY GUIDELINES

- Guidelines are available from multiple sources
- *2002 Sustainability Reporting Guidelines* issued by Global Reporting Initiative (GRI) is the most commonly utilized guide
- Available at [www.globalreporting.org](http://www.globalreporting.org)
- The guidelines accommodate incremental implementation and a graded approach
- Formal certification is not yet available
- Self-certification and third-party assessments are available and are recommended

# NREL EXPERIENCE

- Environmental management and safety processes have always been integrated
- *Sustainable NREL* funded as an “initiative” in FY01 to pursue specific projects and aspects
- Projects are cross-organizational activities
- Assigned to NREL Energy & Environmental Applications Office in FY02, funded as an on-going program, and expanded
- Activities are coordinated with the ES&H program, GPE/GPP, FEMP, construction, etc.



# NREL EXPERIENCE

- Placeholder slide for presenter notes.

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- Third-party assessment conducted in FY02
- Evaluated and validated integration of ISM, EMS, and *Sustainable NREL* program
- Provided guidance on what certifications would be beneficial to NREL
- Recommended elimination of overlaps and gaps between EMS and *Sustainable NREL*
- Promoted using EMS as a tool to achieve sustainability objectives

# BENEFITS TO DOE

- Supports balanced and reasonable social, economic, and environmental performance
- Promotes effective use of resources when used in conjunction with other processes (e.g., EMS, GPP/GPE, FEMP, etc.)
- Supports benchmarking and assessment
- Facilitates stakeholder engagement
- May be an appropriate self-certification